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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/397,814 09/17/99 HU

Z 12610-0450

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IM22/0727

EXAMINER

METZMAIER, D

ART UNIT

PAPER NUMBER

1712

DATE MAILED:

07/27/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/397,814**

Applicant(s)

**Zhong-Cheng Hu**

Examiner  
**Daniel S. Metzmaier**

Group Art Unit  
**1712**



Responsive to communication(s) filed on \_\_\_\_\_

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire one month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

X Claim(s) 1-59 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) \_\_\_\_\_ is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

X Claims 1-59 are subject to restriction or election requirement.

## Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some\* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **DETAILED ACTION**

Claims 1-59 are pending in the instant application. The Information Disclosure Statement filed December 13, 1999 has been received and entered as Paper No. 2.

#### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-51, drawn to methods of making sols, gels, and particles, classified in class 516, subclass 22.
  - II. Claims 52-54, drawn to sols and gels, classified in class 516, subclass 22.
  - III. Claim 55, drawn to an ultrafine or nanosized particle powder, classified in class 428, subclass 402.
  - IV. Claims 56-59 are so unclear that grouping with any of the above groups can not be made at this time. It is unclear how said materials are produced. Thus, it is further unclear what is the scope of said materials.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II or III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the methods may be employed in making sols, gels, nanosized powders or further

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materials such as monodispersed particles which said monodispersed property is not required in the instant composition claims.

Furthermore, the products may be made by another process such as the hydrolysis of a metal alkoxide in an inorganic acid which would result in the ion species of the inorganic metal salt and the organic solvent (as an alcohol) set forth in claim 1. The processes do not require the ultrafine or nanosized powder formation. It is noted product-by-process claims are examined based on the product claimed. The process is given patentable weight only to the extent said process imparts a patentable distinction to the product. See M.P.E.P. § 2113, Seventh Edition, Revision 1, Feb. 2000.

3. Inventions of Group II and Group III are related as reversible or irreversible products made from related processes having distinct and overlapping utilities. Examples of said utilities would include sol-gel processing to make ceramics and/or catalyst. Formation of sols for use in polymer films as an inorganic or filler additive. Formation of powders for use in compacting in ceramic processing. Formation of powders as pigments in coatings and cosmetics which are not in the sol or gel form as claimed. Formation of powder coatings having optical properties.

Attention is further directed to page 17, lines 17 et seq.

4. The inventions of Group IV are so unclear that a relationship with any of the above groups can not be determined at this time.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for

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examination purposes as indicated is proper. The sols, gels and dry powders may have a multitude of uses which are not coextensive.

6. Because these inventions are distinct for the reasons given above and the search required for Group II and III is not required for Group I, restriction for examination purposes as indicated is proper.

*Election of species*

7. Claims 1-59 are generic to a plurality of disclosed patentably distinct species comprising inorganic metals salts and organic solvents and the provided desired characteristics of claim 1 and 34. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. A proper election would include a single disclosed species. Since there are no species claims in the application, applicants may designate a single disclosed species defined in the specification such as an example.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

8. A telephone call was made to Pete Pappas on July 12, 2000 to request an oral election to the above restriction requirement, but did not result in an election being made

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9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

#### *Conclusion*

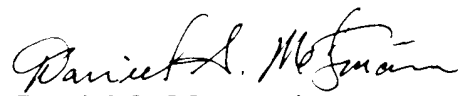
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on Monday through Friday from nine to five-thirty.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached at (703)308-2340.

Official Papers may be submitted to **Group 1700** by facsimile transmission at (703)305-5408 and Official After Final facsimile transmissions may be submitted to **Group 1700** by facsimile transmission at (703)305-3599 in accordance with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 1700** receptionist whose telephone number is (703) 308-0661.

DSM  
July 26, 2000

  
**Daniel S. Metzmaier**  
**Patent Examiner**  
**Art Unit 1712**